CLINICAL Reports on INSANITY XX

CLINICAL REPORTS ON INSANITY,

BY THE

MEDICAL STAFF

OF

THE MARYLAND HOSPITAL FOR THE INSANE.

I. The Relation of Pelvic Disease and Psychical Disturbances in Women.

By GEORGE H. ROHÉ, M. D.,

Superintendent.

II. A Case of Trephining For Insanity.

By J. PERCY WADE, M. D.,

Assistant Physician.

III. A Case Showing the Relation of Kidney Disease to Insanity.

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V. Results Obtained with Sulfonal and Hyoscine in the Treatment of the Insane,

WITH REPORT OF CASES.

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Extracted from the Ninety-fifth Annual Report of the Maryland Hospital for the Insane.

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MARYLAND HOSPITAL FOR THE INSANE.

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I.

THE RELATION

OF

Pelvic Disease

AND

PSYCHICAL DISTURBANCES IN WOMEN.[1]

BY

GEORGE H. ROHÉ, M. D., Superintendent.

PHYSIOLOGY, as well as daily observation teaches the interdependence of mental and bodily functions. Authorities upon mental disease recognize the great influence of somatic or bodily causes in the production of insanity. However, the attention of alienists is concentrated almost exclusively upon the brain in the search for causes of mental disturbance. True, the brain, as the organ through which the phenom ena of mental action is displayed, must necessarily be the immediate seat of disturbances of nutrition as causative of disorders of function, but there can be little doubt that in many cases some more remote cause is present in the physical organism, to which the disturbances in the brain function are traceable. The depressive effect of disorders of digestion upon the

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1 Read before the American Association of Obstetricians and Gynecologists; September. 1892. Reprinted from the American Journal of Obstetrics for November, 1892.

mental state is recognized by all. The late Dr. J. S. Jewell showed by a series of well-observed cases that often simple melancholia is dependent upon overfilling of the colon, and that appropriate treatment of the somatic condition relieved the mental depression. More recently Ayres[1] and Woodbury[2] have called attention to the relation of morbid conditions of the digestive tract to certain forms of mental disturbance. Herter and Smith[3] show, by a series of very suggestive and interesting observations, the probability of the dependence of the epileptic discharge upon intestinal putrefaction. Burr, in an extremely practical and suggestive paper,[4] also relates cases of hypochondriasis depending upon a diversity of morbid conditions of the physical organism. Dr. Alice Bennett[5] has clearly shown the influence of Bright's disease in the causation of insanity, pointing out not only the frequency with which the latter condition is dependent upon the kidney disease, but giving a clear account of the mental symptoms which are most frequently present in the insanity accompanying Bright's disease. Riggs[6] and Tuttle[7] also add their testimony as to the frequency with which kidney disease is associated with insanity. Christian[8] had previously shown that Bright's disease not infrequently stands in a causative relation to insanity.

Clouston, I think, makes the observation that delusions of intestinal obstruction, so frequent in melancholia, may after all be dependent upon some physical condition hindering the passage of the contents of the gastro-intestinal canal—in other words, they may not be delusions at all. A recent autopsy in the Maryland Hospital for the Insane showed the truth

1 Medical News. July 4th, 1891.
2 Journal of the American Medical Association, vol. xv., p. 598.
3 New York Medical Journal, August 20th and September 3d, 1892.
4 Physician and Surgeon, 1891.
5 Alienist and Neurologist, October. 1890.
6 Journal of Nervous and Mental Diseases, September, 1891.
7 American Journal of Insanity, April, 1892.
8 Journal of the American Medical Association, March 23d, 1889.

of this observation. The case, one of profound hypochondriacal melancholia, which had before admission been diagnosticated as cancer of the stomach, had required feeding nearly constantly for his entire period of residence in the hospital (about three years). There was constant complaint of obstruction of the bowels, although no abnormality could be made out on physical examination. After death the descending colon was found constricted for a distance of six inches to a diameter of not over half an inch. Clouston records an almost exactly similar case.

The mental disturbances—actual insanity, not merely febrile delirium—accompanying or following infectious maladies, structural or nutritional diseases of the eye, ear, heart, lungs and kidneys, are generally recognized. Among the general public and the medical profession the influence of abnormalities of the sexual organs in producing mental aberrations is also believed in to a considerable extent. Indeed, some of the highest authorities in mental diseases, as Esquirol and Guislain, emphasize the overwhelming influence of the genital organs, especially in women, in the production of insanity. Strangely, however, while physiologists recognize and impress the great influence of the normal sexual functions upon the mental state of the individual, alienists generally seem disposed to deny any influence to these organs when in a morbid condition. The fact cannot be denied that at the menstrual period all psychical disturbances are intensified. Maniacs become more disturbed and noisy, epileptics have more frequent and more violent attacks, and melancholiacs are more disposed to depression and suicide at this time. If this is generally admitted, it seems to me very irrational that the influence of abnormal conditions of the genital organs upon psychical processes should be so vehemently denied. It is probable that the prevailing opposition of alienists to the view that psychical disturbance may be dependent upon morbid bodily conditions outside of the brain is due to the

general conception that insanity is a disease, whereas, as Tuke insists, "insanity is not a disease. It is a symptom produced by many morbid conditions which may arise primarily in the brain, or secondarily from depraved conditions of the general system." Indeed, this same authority utters this strong reproach to the alienists: "No one will venture to say that the foundations of general and so-called psychiatric medicine are equally firm or established on similar principles. No; the general conception of insanity is on the same level as that of the dropsy a century ago; and its varieties—mania, melancholia and dementia—are not one whit more pathologically definite than the anasarca, ascites and hydrothorax of that period, and they must remain so till such time as the subject is studied by the same lights as those which enabled the anatomist and pathologist to break up the generic term dropsy into a series of widely different conditions possessing a common symptom."[1]

So much in the way of explanation and criticism has seemed to me necessary. The temptation to continue in the same line is strong, but two Fellows of this Association, Dr. C. A. L. Reed and Dr. I. S. Stone, have shown plainly that the majority of American asylum physicians have not been fully alive to the importance of the relations between mental disturbances and disease of the sexual organs in their female patients. It is, however, not alone in our country that the complaint is heard. In Great Britain Robert Barnes, and in Germany Louis Mayer, accuse their psychiatric confr res of similar lack of appreciation. "An insane woman has surely as much right to relief from disease of the ovaries and uterus as a sane woman has," says Barnes; and Mayer laments the neglect of the investigation of the relations between mental and sexual diseases of women in German in-

1 British Medical Journal, May 30th, 1891.

sane hospitals as an offence to science no less than unjustifiable inhumanity.[1]

So far as this country is concerned. however, the writer thinks he may say the reproach that this class of cases is neglected in our insane hospitals will not be justified much longer. Our Fellow, Dr. Manton, has just preceded me with the relation of no small experience in the hospitals of the State of Michigan. Dr. Alice Bennett, I am informed, has begun the work in the excellent institution over which she presides with such signal ability. All over the country come isolated reports from the officers in charge, showing that the opposition to active surgical interference in appropriate cases of insanity is not only dying out, but that advanced alienists are ready to lend a hand in the prosecution of a work which I am confident will be fraught with advantage to science and humanity.

I am of opinion that much of the opposition heretofore manifested toward gynecological treatment of insane women had its origin in the lack of positive results from most of the manipulative treatment heretofore practised. There can be little doubt that the frequent exposure of the patient and introduction of the speculum, the passage of a sound and attempted forcible reposition of a retroverted and adherent uterus, the introduction of a pessary, or perhaps, worst of all, the practice of that form of vicarious masturbation known as pelvic massage, would lead to results the reverse of beneficial in insane, as they have resulted in sane women. Modern surgery and gyne-

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1 "Es ist bedauerlich, dass man von psychiatrischer Seite, obgleich von Niemandem die grosse ætiologische Bedeuting der Geschlechtssphære fuer Geisteskrankheiten des Weibes geleugnet wird, wenig bemueht gewesen ist, diese verhæltnisse in das richtige Licht zu stellen, indem man exacte Untersuchungen der Genitalsphære theils aus æusseren Ruecksichten oder unhaltbaren, moralischen Gruenden, theils aus Mangel an der nœthigen Sicherheit und Erfahrung anzustellen unterlassen hat; trotzdem, das darin sicherlich nicht nur ein Vergehen gegen die Wissenschaft, sondern vor Allem eine nicht zu rechtfertigende Inhumanitæt liegt, insofern es in folge davon nicht selten versæumt wird, da Huelfe zu gewæhren, wo sie noch mœglich wære." (C. E. Louis Mayer: "Die Beziehungen der krankhaften Zustænde und Vorgænge in den Sexualorganen des Weibes zu Geistesstœrun-gen," Berlin, 1870, p. 40.)

cology, however, offer and produce positive results, principal of which is the relief of suffering. As Barnes well says: "Before the recent advances of gynecology, women, sane and insane had to suffer from ills now known to be curable," and there is certainly no excuse why the insane suffering woman should be deprived of the succor offered to her sane sister.

It was at first my intention to give a general summary of the work heretofore done in this field and the results obtained, before giving my own experience. So many of the previous reported cases are, however, negligently recorded, or published too soon after the operation to allow any safe conclusions to be drawn. The criticism may be made against me also that this report is premature; but I regard the subject as too vitally important to permit of longer delay, and present my experience in order that others may be encouraged to continue and extend the work if the results seem to furnish a justification therefor.

Every gynecologist has had within his own experience cases of mild neuroses, persistent pain, psychical depression not amounting to melancholia, "nervousness," hysterical manifestations, etc., which he has found to depend upon some lesion in the pelvic organs, and every Fellow of this Association has, I am confident, given relief to such patients, removing their nervous troubles by appropriate treatment. I venture to say that no form of treatment gave such prompt results in these cases as the surgical, whether that consisted in the ablation of the uterine appendages, the extirpation of the uterus, the repair of a cervical laceration, or the restoration of a ruptured perineum. At all events, I do not hesitate to say that this has been my own experience with women outside of an insane hospital. But in the following pages I shall confine myself to recording cases that were actually insane, so pronounced after a judicial inquiry or by two competent physicians, and who had been under observation for some time, in some cases for years, in a hos-

pital for the insane. The cases here briefly detailed were selected from an average female population in a hospital of two hundred persons. Of these, thirty-five were subjected to vaginal examination, mostly under anesthesia. The examination consisted of thorough exploration of the pelvic excavation with one or two fingers, or if necessary the whole hand, in the vagina, with the other hand over the abdomen. In most cases this was supplemented by an examination by the rectum. The vaginal speculum was used not over twice, and the sound never, except for the purpose of exploring the bladder.

The patient was prepared for examination by a thorough purgation with Epsom salts the day before the examination, followed in the morning by an enema of Epsom salts and glycerin, a thorough bath, and a vaginal douche. Resistance to the examination was rarely encountered, and anesthesia was employed, not for the purpose of bringing a refractory patient under submission, but to render the examination more thorough and satisfactory. The cases examined were selected, not because there seemed more evidence of pelvic disease in them than in others, but because they seemed to present more prospect of a successful result to treatment. Imbeciles and dements were not examined, though I have little if any doubt they would show as large a proportion of pelvic disease as those that were subjected to examination. Among the thirty-five examined, twenty-six, or 74,3 per cent, showed some evidence of pelvic disease or abnormality. I am confident that at least fifty per cent of the women in this hospital would show lesions of the genital organs if all were thoroughly examined. In some unexamined cases an autopsy has shown unsuspected pelvic disease. In all cases where sufficiently serious pelvic lesions were found, and where the consent of the legal or natural guardians could be obtained to the operation, the uterine appendages were removed by abdominal section. In some cases supplementary

operations, such as repair of lacerated cervix, restoration of the perineum, excision of the vulvo-vaginal gland, and dilatation of the urethra, were performed. Believing that a diseased, adherent, or compressed ovary caused more persistent and graver trouble than a lacerated cervix, a torn perineum, or an irritability of the bladder, I considered it my duty to give my first attention to that. I chose the radical operation of removal of the organ because, in addition to going at once to the fountain-head of the local mischief, I at the same time rendered the woman sterile and incapable of propagating defective offspring. Whether in doing this I have assumed a responsibility beyond the proper limit or not must be left to the decision of the profession and the public. Inasmuch, however, as in the majority of my cases the lesions of the ovaries and tubes were sufficient of themselves to demand removal, the other question referred to may be considered as a merely hypothetical one, not relevant in the present consideration.

The cases were prepared for operation by a thorough purgation with Epsom salts the day before the operation; a thorough scrubbing was given the day before, and repeated on the morning of the operating day. Immediately before the patient was anesthetized she received an enema of one ounce of Epsom salts, two ounces of glycerin, and sufficient water to make four ounces. After this had acted the vagina was washed out with clean warm water. The anesthetic used in all cases was the alcohol-chloroform-ether mixture, and an assistant was charged with the sole duty of its administration. The Trendelenburg posture was always used, and I am more than ever convinced of its superiority over the extended dorsal position. After the patient was placed upon the table the abdomen was well scrubbed with a nail brush and soap and hot (distilled) water, and the pubes and lower portion of the abdomen shaved. The operation field was then thoroughly washed with soap and water, and dried

with a sterilized towel. Latterly I have used a solution of sodium hypochlorite as an additional aid to asepsis, but have not seen any advantages from its use.

All instruments, dressings, ligatures, sutures, brushes, operating gowns, etc., except sponges, used about the the operation, were subjected immediately before the operation to steam under slight pressure for twenty or thirty minutes. The temperature reached by the steam is probably 220° F. Sponges were thoroughly washed in an alkaline solution, several times in hot water, and then kept in a solution of mercuric chloride 1 : 500; before use they were thoroughly washed out in hot distilled water. All the water used is distilled, and is readily obtained by tapping the return pipe carrying the condensed steam to the boiler house. As a sterilizer one of the laundry tubs, fitted with a steam pipe perforated, is used, and gives thorough satisfaction. The suture material used in all cases was silkworm gut, except where intestinal coats were injured, when fine silk was used. Strong cable-twist silk was used to ligate pedicles. The suture of the abdominal wall was made by transfixing the entire thickness of the wall—skin, connective tissue, fascia, muscle, and peritoneum. Where necessary superficial sutures were used to secure perfect apposition. The wound was dressed, after suture, with iodoform gauze, absorbent cotton, and a tailed flannel bandage. Unless displaced by the movements of the patient, the bandage was not disturbed until the seventh or eighth day, when it was removed, the stitches taken out, and the line of incision again dressed with iodoform, a narrow strip of iodoform gauze, and adhesive plaster. In some cases the abdomen was irrigated with warm distilled water, while in others the cavity was simply sponged dry. No drainage was used in any case, although I believe two cases would have been saved had it been employed. The after-treatment consisted in keeping the patients quiet and without food and

drink until all nausea had subsided. On the second day a little tea was tried, and, if it caused no nausea, was followed by beef tea, and this in a day with milk, milk toast, chicken soup, and so on gradually to roast beef, beef steak, and mutton chops until the regular hospital fare could be taken and digested. On the third day, or earlier if there were any indications of fever, an Epsom salts and glycerin enema was given, followed usually by several doses of Epsom salts until the bowels were well cleared. After the second day no restraint was placed upon the movements of the patient, except that she was not allowed to get out of bed. In some of the earlier cases where great restlessness was manifested, the patients were kept on their backs by a broad band of strong muslin drawn across the knees and fastened to the sides of the bed, and in a few cases the ankles were fastened by a muslin strap and padded leather anklet. More experience in managing the patients has enabled us to dispense with all restraints, even in the most obstinate cases. Two gentle and experienced attendants can easily keep in bed the most obstreperous patient by the exercise of a little tact. In this place I gladly take occasion to express my many obligations to the liberality and encouragement of the board of managers of the institution entrusted to their care by the commonwealth, and to the intelligent assistance rendered in the management of these cases by my former assistant physicians, Drs. B. D. Evans and Wm. L. Robins, and my present efficient house staff, Drs. J. Percy Wade, M. D. Norris, Fred. Caruthers and J. H. Scally. No less are my obligations to the intelligence and self-sacrifice of my nurses and attendants, who have taken a personal interest in every case, and by their care, gentleness, and endurance have rendered this work possible.

I have classified the cases according to the clinical form of mental disturbance present. The total number of cases operated upon is eighteen, of which six were melancholia, one simple mania, four puerperal

mania, one hysterical mania, two periodic mania, one hystero-epilepsy with mania, and three epilepsy.

I. *Melancholia* (six cases).—The first two cases belong to the class known to alienists as melancholia attonita, or melancholia with stupor. T. Claye Shaw states that mental stupor is frequently connected with genital irritation and is more frequent in women. The first case resembled in many of its features the condition first described by Kahlbaum under the name katatonia. The second is one which I am uncertain about placing in this category, but the suicidal tendency seems to indicate its location among the melancholias. The third case is one of decided hallucinations of hearing, with imperative impulses to use profane and obscene language—a phase of the *Zwangsvorstellungen* of the Germans to which Charcot and Magnan have applied the term "onomatomanie." The fourth case was one of strongly suicidal tendency, one attempt being made before admission, and two since her residence in the hospital. The fifth case was one of profound depression with delusions of impending death. In this case the ovaries were atrophied to an extreme degree, although the menopause was not yet established. The sixth case is too recent to permit any opinion of the ultimate result, although her present condition is decidedly encouraging. In all the cases of melancholia operated on considerable improvement has followed, None of the cases have improved sufficiently, however, to justify discharge as cured. Bantock has reported a case in which removal of the appendages was followed by cure of melancholia; Marion Sims had recommended the operation in this case. A case is also reported by Bircher in which recovery from melancholia followed extirpation of cystic ovaries.

Case I.—Mrs. Lydia A. B., age 32, white, has been married for ten years and had ten children. The history is bad; the patient's mother at one time suffered from an attack of melancholia, and one sister was

insane. Admitted to the Maryland Hospital for the Insane suffering from great depression; refused to work or eat, was as helpless as a child, and had to be dressed and undressed; if placed in a chair would remain unless removed. She had well-marked suicidal tendencies, and twice attempted suicide before admission—once by means of a knife, and again by drowning. During her menstrual periods she exhibited great restlessness, wandering from one room to another and to the windows. She was also very obstinate, resisting food and efforts to change her clothing. Upon vaginal examination the cervix was found moderately torn; no induration in the pelvis. Operated on October 13th, 1891, on the third day of her menstrual period, under the usual aseptic precautions. Ovaries and tubes removed. No adhesions. Small hematoma from ruptured follicle in one ovary. There was no hemorrhage, and irrigation or drainage was not used. Patient did well after the operation; the sutures were removed on the seventh day, and the wound had united by first intention. She has shown some slight improvement since the operation. Although she is still depressed and refuses to talk, she will often brighten up and smile, occasionally dressing herself. When her children visit her she recognizes and shows affection for them. Her physical condition, which at the time of the operation was extremely bad, has greatly improved.

Case II.—M. K., age 24, white, single. Family history bad, her father being an epileptic. Admitted to Maryland Hospital for the Insane October 22d, 1888. Had then been insane for three months. For two years previous to insanity she was depressed and did many strange things. When admitted she was greatly depressed, refused to talk during the day, but at night talked continuously, much to the annoyance of the other patients. She refused to answer questions, but worked in the sewing-room and attended the dances, but no inducement could make her speak. There were well-marked suicidal tendencies, and she twice attempted suicide

before admission—once by drowning, and again by cutting her throat with scissors. Vaginal examination showed no appreciable morbid conditions of the pelvic viscera. In spite of this negative result, however, removal of the appendages was decided upon, and the operation performed January 19th, 1892. The right ovary was found to be cystic and the tube congested and tortuous. Usual aseptic precautions. No irrigation or drainage. Patient recovered rapidly from the operation, and the sutures were removed on the eighth day. The wound had united by first intention. There has been some improvement since the operation; the depression is not so great, and, although she will not talk, she brightens up and smiles when spoken to, works and attends the dances regularly. When her friends come to see her she talks pleasantly to them—a thing which she never did before. The suicidal tentencies have disappeared. While the improvement has not been marked in this case, the patient is still on trial, and further favorable changes may, I think, be looked for.

Case III.—M. T., white, single, age 31. No history of insanity in the family. Previous to her mental trouble she was quiet, amiable and industrious. In 1885 she had an attack of what her physician termed "nervousness." In March, 1891, she was admitted to the Maryland Hospital for the Insane. She was greatly depressed and had lost interest in her home and surroundings. She suffered from hallucinations of hearing and the peculiar symptom described by Charcot and Magnan as "onomatomanie." She hears obscene and vulgar language and has an almost uncontrollable desire to repeat it. There were no suicidal tendencies. She slept very badly except through the aid of an hypnotic. Her health was much below par, but under tonic treatment it improved somewhat. Vaginal examination revealed enlarged and tender ovaries. Operation performed November 4th, 1891. Tubes and ovaries of both sides—the latter were much enlarged—

were removed under strict asepsis. No irrigation or drainage. She recovered rapidly from the operation, and on the eighth day the sutures were removed and the wound was entirely healed. The patient improved considerably after the operation. She became cheerful, interested herself in light work, and talked pleasantly with the other patients. The hallucinations of hearing and onomatomania, although they did not entirely disappear, decreased to a considerable degree. She has written several letters home, whereas before the operation she could not concentrate her thoughts sufficiently to do so. Her general health also improved. This improvement continued for about five months, and the time of her discharge had already been fixed, when she was attacked by dyspeptic symptoms, lost appetite, had almost constant nausea and vomiting, and lost considerable flesh. With the decrease in her physical health her mental depression returned. A thorough examination of the lungs and heart, and a chemical and microscopal examination of her urine, failed to show any cause for the gastric derangement. The stomach was washed out and showed hyperacidity of the gastric secretion. She was then placed upon Parke, Davis & Co.'s hemoglobin compound for several days and gradually carried on to milk and other diet. At the time of writing her physical condition is again slowly improving, the digestion is fairly good, she is gaining in weight, and coincidently her mental depression is becoming less marked. The imaginary voice in her head and chest, however, continues to trouble her and is doubtless responsible for much of her depression.

Case IV.—Mrs. H. M. S., age 30, white, has been married for eight years and given birth to two children. Hereditary taint in family denied. Previous to insanity she was industrious and of a lively, cheerful disposition. Admitted to the Maryland Hospital for the Insane October 5th, 1891, suffering from melancholia. Depression very great, loss of affection for her husband and children, restless, walking the floor,

crying all day, and rarely talking. Suicidal tendencies marked and active, having attempted suicide by jumping from a window before admission. She did not want to live, and repeatedly begged her friends and relatives to kill her. He catamenial flow had been irregular during the last year, the periods following each other within two or three weeks. Physical condition in a very fair state. Upon vaginal examination the following conditions were found to exist : a lacerated cervix uteri and evidences of a bound ovary on the right side. Abdominal section done on November 4th, 1891, with removal of both uterine appendages. Strict asepsis. The right ovary was firmly bound down and the tube on the same side tortuous and congested. Left ovary not congested or adherent. There was some hemorrhage, caused by the breaking-up of adhesions, and the abdominal cavity was thoroughly flushed out with warm distilled water. No drainage. Patient recovered promptly from the operation, the temperature not going above 100° after the second day. Stitches removed on the seventh day and the wound found firmly united. Three weeks subsequent to the operation, after a visit from some friends, she became very much depressed and asked every one that came in the ward to kill her. At first she wanted to be shot, then she wanted me to bring a saw and saw her head off, and finally she expressed a wish to be thrown into a dungeon and left alone to die. She slept fairly well, but early in the morning her moans and requests to be killed were most distressing. During this period she made two attempts at self-destruction, which were frustrated by the watchfulness of the attendants. Bromide of potassium and chloral with cannabis indica, in large doses, failed to quiet her. Finally, under opium in large doses, she became quieted and now passed into a cataleptic state. She would stand for an hour in the same position, staring in front of her and taking notice of nothing passing around her. She ate poorly and lost flesh.

After a time she gradually came out of this depression and began eating and sleeping very well. At the present writing, September 10th, 1892, she is quiet and cheerful, but not very talkative. She assists the attendants in the ward and in the dining-room, plays croquet, goes to the chapel and the dances, has gained about twenty pounds in flesh, and has apparently lost all tendency to suicide.

Case V.—E. W., age 43, white, single. Family history bad, one sister being insane. Admitted to the Maryland Hospital for the Insane February 22d, 1892, suffering from melancholia. Very much depressed; refused to talk or go out on the grounds. She spent her time in crying and bemoaning her fate. She repeatedly asked to be allowed to die, saying she was unfit to live. On one or two occasions she refused to eat, but had no delusions in regard to her food. Her menstrual flow had been irregular for some time, occurring often not more than once in three months. Vaginal examination showed nothing abnormal about the genitals. Operated on April 20th, 1892. Both ovaries were found to be greatly atrophied and the tubes congested and tortuous. No irrigation or drainage. She recovered nicely from the operation, the temperature not going above 100° F. Sutures were removed on the eighth day and the wound found perfectly united. Her improvement has gone on slowly but steadily since the operation. The depression is not so great, she is bright and fairly cheerful, talks with the other patients goes out on the lawn and to the dances, and never expresses a desire to die as she did formerly. She also does some light work about the ward.

Case VI.—Mrs. S. G., white, age 32, widow. She was married when 18 years old and has had four children, the last two being twins, born in 1885. Family history not good; two uncles on her father's side were insane. Her disposition has always been a despondent and gloomy one, not caring about society. She has

suffered from uterine trouble for several years. Five years ago she consulted one of the most eminent gynecologists in Philadelphia, who advised removal of the ovaries. Not being willing for this, she consulted an equally eminent neurologist in the same city, who expressed decided opposition to the operation and treated her for some time in his private hospital. No improvement following, she was taken home and a year later consulted a noted Baltimore gynecologist, who advised trachelorrhaphy, which was afterward done in one of the hospitals of that city. I may mention, *en parenthèse*, that another local authority, appealed to in the interim, suggested marriage as a remedy in her case, as no local lesion was found by him to exist. The repair of the cervical tear had no good effect, and she was admitted to the Maryland Hospital for the Insane May 14th, 1892. Two years prior to admission she showed signs of melancholia, became depressed and low-spirited, talked little and avoided her friends, but under tonic treatment she improved somewhat. About three months ago, during her menstrual period, she complained of pain in her head, became depressed, morose, disagreeable and irritable; would have nothing to do with her parents, who, she said, mistreated her. She heard voices speaking to her and telling her to do certain things: she talked a great deal about her husband (who died three years ago) and children. She was obstinate, and when she determined on any action no argument could change her. She got up at all hours of the night and would dress herself, saying she could not remain at home. When admitted she was somewhat depressed and irritable, sleeping very badly at night. There are no suicidal tendencies, but her conversation is rather strange. She says God directs her to do certain things and she must obey. She has delusions of persecution, and especially that her father is mistreating her and depriving her of comforts which are hers of right. She writes a great deal, but there is little sense in her letters. She is always morose, disagreea-

ble and peculiar in her actions during her menstrual periods. For awhile she improved a great deal, became amiable, associated with the other patients, and the delusions to some extent disappeared. During July she became worse and relapsed into her old condition. Upon vaginal examination the uterus was found enlarged, with tenderness over the ovaries. Operated on August 30th, 1892. Right ovary was much enlarged and cystic. Left ovary enlarged and contained about two drachms of blood. No irrigation or drainage. She recovered rapidly from the operation and the sutures were removed on the seventh day. Wound had united kindly. Although it is too soon to look for decided results to follow the operation, nevertheless she is pleasant and agreeable, and talks encouragingly about herself and her recovery. She has been easy to manage and has done everything to assist the nurses in performing their duty.

I have classed this case among the melancholias, from the most marked symptom present, although the case is probably one of paranoia.

II. *Simple Mania* (one case).—In this case there seemed to be decided connection between the uterine displacement and the mental aberration. The patient since the operation has shown decided improvement in her mental condition, although she is not yet well enough to be discharged from the hospital.

Case VII.—M. S., age 29, single. Insanity in the family denied. Before the onset of insanity the patient was amiable, lively, affectionate and industrious. Admitted to the Maryland Hospital for the Insane October 12th, 1891, having been insane one year previous to admission. She was disagreeable, at times depressed, and at others would become violent, strike at her friends, break furniture, while her language was both obscene and incoherent. She repeatedly soiled herself and her bedding, and had to be dressed and undressed. In her appearance she was rather slovenly. She was always worse during her menstrual flow, and during

the intervals between the flow behaved fairly well, her language at that time being much better and her temper more even. Vaginal examination showed a retroflexion of the uterus with adhesions. This condition had already been discovered by the family physician, Dr. J. McPherson Scott, of Hagerstown, who not only agreed to but strongly advised removal of the appendages, and subsequently lent me his valuable counsel and assistance at the operation. Operation performed November 19th, 1891, with the usual aseptic precautions. Right ovary not adherent. Left ovary bound down and had to be torn away from the adhesions. There being some bleeding in the cavity from the adhesions, it was flushed out with warm distilled water. No drainage. The patient recovered from the operation without one bad symptom, and the sutures were removed on the seventh day. The wound had united perfectly. There has been marked improvement in her case. She is cheerful, amiable, sleeps in the dormitory with the other patients, and has had no maniacal outbreaks since the operation. Does not soil herself and is much neater in her dress. She answers questions fairly well and talks with considerable intelligence. Although her language is sometimes larded with vulgar words, it is only exceptionally so, and she is never obscene. Her physical condition has improved, and it is hoped that her mental restoration will be complete in time.

III. *Puerperal Mania* (four cases).—In all four of these cases there were lesions of the pelvic viscera sufficient to demand the operation. In the case of F. L. C. one of the ovaries was enlarged and displaced. In reference to this case I may be allowed to quote the opinion of Dr. Robert Barnes: "Occasionally one ovary sinks down in Douglas' pouch, getting below the level of the uterus. Severe symptoms follow and have been relieved by maintaining the ovary in its proper place or by removing it." Expedients for "maintaining the ovary in its proper place" seemed to

me too uncertain in results to waste time upon them, and I decided to remove the organs. The operation was followed by prompt and complete recovery. In the first report of these cases[1] I venture to point out the almost constant relation between preceding or coincident puerperal infection and the class of cases of mental aberration usually termed puerperal mania. I take the liberty of here quoting the conclusions of that report:

"1. Puerperal insanity is, in at least the large majority of cases, an infection psychosis.

"2. Without rejecting the influence of other factors, such as heredity, anemia, exhaustion, mental shock and distress, careful observation will show that few cases of puerperal insanity occur without preceding or coincident puerperal infection.

"The reasons for this opinion may be briefly summed up as follows:

"1. Puerperal insanity occurs in the great majority of cases within the first ten days after delivery—about one-half in the first five days—the same period during which puerperal infection usually occurs.

"2. It is usually accompanied by elevation of temperature and other evidences of febrile disturbance.

"3. The clinical form in which puerperal insanity manifests itself is, in the majority of cases, that of acute, delirious, or confusional mania. Depressive states are rare except as secondary forms. In other words, the most frequent condition is one most closely resembling febrile delirium.

"4. The death rate is much higher than in simple mania. Death occurs from exhaustion, usually with high temperature and rapid pulse.

"5. Post-mortem examinations, though apparently infrequent in these cases, have shown grave involvement of the pelvic viscera.

"6. Examinations of the pelvic organs during life show lacerations of the perineum and cervix uteri

1 Journal of the American Medical Association, July 16th, 1892.

(facile channels of infection in the puerperal woman). As secondary conditions are found intrapelvic (peritoneal) inflammations, and consequent abnormal locations, fixations, and congestions of the uterus, tubes, and ovaries.

"7. The results of operations seem to show that removal of local sources of irritation increases the chance of recovery from the mental disease."

As sustaining these propositions I may quote the opinion of Drs. J. Batty Tuke and G. Sims Woodhead, in Tuke's "Dictionary of Psychological Medicine," vol. ii., page 911: There is strong reason for believing that in puerperal insanity a considerable proportion of cases is due to toxic influences. It must be remembered that although a woman may become insane during the puerperal period, her case need not be referable primarily to childbirth. Mental symptoms may be, in point of fact, idiopathic—*i.e.*, the result of so called normal causes—the effect of which, culminating at the birth of her child, show themselves some three weeks or a month later by an attack of simple mania or melancholia. But the violent delirious mania which is apt to develop within fifteen days after delivery has all the aspect of being due to toxic influence. Its sudden inception, delirious character, rapid development, inflammatory complications, and tendency to death are eminently suggestive of septic origin. Such cases rarely present themselves later than a fortnight after childbirth (the period during which septic changes go on in the uterus), and more frequently within ten days. Absorption from the uterine surface of disorganized material and blood, acting on a system which has been already subject to considerable drain, exercises its influence on the most highly organized cells, and acute, violent mania, temporary in character but followed by prolonged brain weakness, is the result."

CASE VIII.[1]—Mrs. A. T., white, age 33 years, has

1 Before reported in the author's paper on "The Influence of Parturient Lesions of the Uterus and Vagina in the Causatian of Puerperal Insanity," Journal of the American Medical Association, July 16th, 1892,

been twice married, first at the age of 17 years. Of this marriage one child was born. Her husband died two and one-half years after, and, after remaining a widow four and one-half years, she married her present husband, who is a minister. There is no family history of insanity. In 1882, three days after the birth of her child, she had an attack of puerperal insanity, maniacal in character, with lasted five months. She remained well until October, 1886, and was then again attacked with acute mania. After this had continued ten weeks she was admitted to the Maryland Hospital for the Insane. She was very much excited, violent toward her husband and others with whom she came in contact. She was extremely obscene and profane, irritable, morose, and disposed to fight on the least provocation. She soiled her clothing, bed, and room, and was a source of great trouble to the attendants. A pleasant "good-morning," addressed to her by the physician on passing through the ward, was generally the signal for a volley of obscenity and profanity. She sometimes acted as if she had hallucinations of hearing, but on account of her ill-temper no clear history of hallucinations or delusions could be obtained. She did not improve, but showed a progressive tendency toward dementia. Her menstrual periods were attended by an exacerbation of symptoms. She was always more violent at her periods. An examination was made of the pelvic organs last September, and the following conditions found to exist: The perineum was torn down to the sphincter ani, causing the vulvar opening to gape widely. The cervix uteri was lacerated to the vaginal insertion on the left side and to a lesser degree on the right. There was decided intrapelvic induration on the left side of the uterus. Believing that these unfavorable conditions, together with the evident unfavorable influence of the menstrual periods, justified the induction of the menopause, I removed the uterine appendages on October 6th, 1891. The operation was performed under aseptic conditions.

No chemical antiseptics or disinfectants were used. No drainage. The right ovary was cystic and firmly adherent in Douglas' cul-de-sac. Left tube tortuous and broad ligament thickened and congested. The abdominal cavity was irrigated until the water returned clear. Five deep and two superficial silkworm-gut sutures were employed to close the incision. Patient recovered well from the operation. Sutures were all removed on the seventh day and the wound found firmly united. Three months after the operation the patient had shown considerable mental improvement. She began to take an interest in books, pictures, flowers, etc. While her attempts at conversation were disconnected, she dwelt more on pleasant themes, and her former violence of speech had almost entirely left her. After Christmas she began writing letters to her husband, making inquiries of her children and expressing much affection for them. This she had not done for over five years. She continued to improve up to a certain point, and at her husband's visits she received him affectionately but quietly. While memory of past events and love for her husband and children seemed to return gradually, there was still a lack of co-ordination of thought, and this has not further improved. The brain disorganization (physical basis of dementia) had probably progressed too far to be restored even approximately to the normal. At the time of writing, ten months after the removal of the appendages, the patient is quiet and cheerful, although relapsing into profanity when irritated. She no longer fights and rarely soils her bedding, room, or clothing. She dresses and undresses herself, makes her bed, sweeps the room and waters the flowers and plants in the ward. She is not restored mentally, probably never will be: indeed, is most likely, I think, to pass deeper into dementia. But from a violent, excited, noisy and dirty patient she has improved so much as to allow her to be kept in the quietest ward in the hospital; and this gain may, I think, be largely, if not entirely, ascribed to

the removal of the uterine appendages. I may say that I subsequently sewed up the lacerated cervix and restored the vaginal outlet by Emmet's procedure, without any appreciable effect upon the patient's mental condition.

Case IX.[1]—Caroline A., white, age 39 years, married fifteen years, and the mother of seven children. Last child was born in April, 1887, four months before her admission to the hospital. No history of insanity in the family. Four weeks after the birth of her last child she suddenly developed delusions of persecution—claimed that some one was after her and trying to kill her. Her language became very profane and vulgar. She at one time made a violent attack upon her mother. She was one of the most troublesome and destructive patients in the hospital. She would strip herself in the ward, attack the attendants and other patients, use the most obscene language, break the furniture, dig the plaster out of the wall of the room, soil her clothes, bed and room, jump at and hug any man coming within her reach, and make herself generally disagreeable to her surroundings. She was always worse during her menstrual periods, and at these times was kept secluded in her room on account of her tendency to strip herself. Vaginal examination showed a moderate perineal tear, but a deep bilateral laceration with eversion and erosion of the cervix, and enlarged uterus. Pelvic induration of moderate degree in Douglas' cul-de-sac. Abdominal section with removal of the uterine appendages was done on December 15th, 1891. Tubes on both sides were thickened, congested, and convoluted. Left ovary adherent. Small cyst in left broad ligament. No irrigation. No drainage. Patient recovered well from the operation, and sutures removed on the seventh day. Incision firmly united. The patient seems to be slowly recovering a part of her mental faculties. She has become cleanly in habits and no longer indulges in her former vulgarity. The day

1 Before reported; see note to Case VIII.

before this present writing she received a visit from two of her children, and met them with every demonstration of affection. Her conversation is not connected, but it is now neither violent nor offensive. She sleeps in a dormitory with six other patients, eats in the ward dining-room, keeps herself neat and clean, and is industrious in the use of the needle. Barring the non restoration of her mental faculties, there has been a complete transformation in the habits, acts and speech of this patient.

Case X.[1]—Mrs. F. L. C., age 28, white, married, and mother of three children. No hereditary history of insanity. Eight days after the birth of her first child she became insane, the mental disturbance lasting two weeks. Seven months after the birth of her second child she had another attack, which lasted fifteen months. A third attack began a year after the birth of her last child. Three days after this outbreak (on December 28th, 1891) she was admitted to the Maryland Hospital for the Insane. She was excited but very weak. Her language was shocking in its profanity and obscenity. Sexual excitement was pronounced. For several weeks her pulse was so weak and rapid that at times her life was despaired of. She was kept in bed and fed every two hours with milk, eggs and brandy. Digitalis was given to keep up the force of the heart. Her mental condition did not show any signs of improvement upon returning strength. An examination under anesthesia disclosed a deeply ruptured perineum with gaping vaginal entrance, lacerated cervix, with prolapse of the right ovary. On March 9th, 1892, the uterine appendages were removed. No adhesions were found. Both ovaries were very much enlarged, being at least three times the normal size. No irrigation. No drainage. On the day previous to the operation the patient was cross, obscene and profane in her language. Within two hours after the operation, as I entered her room, she burst into tears,

1 Before reported; see note to Case VIII.

asked me to forgive her for the ugly language she had used toward me and the assistant physicians and attendants, and acted in an entirely rational manner. She recovered well from the effects of the operation, but on the eighth day after the operation, and the day after removal of the sutures, the evening temperature ran up to 102.4° F., and on examination a mural abscess was discovered, which discharged freely through the stitch holes for about two weeks. In spite of this, however, her progress toward recovery, both physical and mental, was uninterrupted, and she was discharged well on May 8th, two months after the operation.

Case XI.[1]—M. L. B., age 37 years, white, married thirteen years, and mother of six children, the youngest four months old at the time of her admission to the hospital. The family history is bad, mother being at one time insane and her father very intemperate. She was admitted to the hospital May 16th, 1890. She had one previous attack of insanity ten years before the present attack, but it is not certain whether it was connected with the birth of any of her children. She had delusions and hallucinations. She was never violent, but was talkative, exalted, and would strip herself in the ward. She was very much run down when brought to the hospital, and gained strength very slowly under stimulants and nutritious diet. During her menstrual periods she became exalted and evidently had increase of sexual excitement. Her face was flushed, and she would try to get near to and touch the physician passing through the ward. At other times she was quiet and unobtrusive, but evidently under the influence of her delusions. Examination disclosed bilateral laceration of the cervix, with thickening of the posterior lip. There was an inflammatory induration on the left side of the uterus, which was very sensitive to pressure. On November 25th, 1891, the uterine appendages were removed. Left ovary adherent and tube thickened and convoluted. Irrigation. No drainage. Patient recov-

1 Before reported: See note to case VIII.

ered without a bad symptom. Stitches removed on the seventh day and incision found firmly united. In this patient, delusions of personality continued for several weeks after the operation, but gradually faded away. Her conversation became connected and rational, and in two months after the operation her mental faculties seemed to be completely restored. Her climacteric symptoms, headache, backache, constipation and nervousness were especially severe, but at this writing, over six months after the operation, their severity is lessened and she is more comfortable. Her mental condition is completely restored to the normal. On August 21st, 1892, she was discharged from the hospital, recovered.

IV. *Hysterical Mania* (one case).—There may be some doubt as to the propriety of speaking of hysterical mania as a distinct form, but modern alienists do not hesitate to give it a special place. Dr. Conolly Norman, in Tuke's "Dictionary," has an excellent article upon the subject, and Tomlinson[1] describes six well-marked cases. In the case here reported the nervous and psychical symptoms had a material substratum in the intrapelvic adhesions. Shortly after the operation the patient seemed on a fair way to complete recovery, but she subsequently relapsed. At present her mental state is about the same as before the operation, but her physical condition is much improved.

Case XII.—H. V. McN., age 39 years, white, single, admitted to the Maryland Hospital for the Insane in February, 1890, having been insane three months prior to admission. The cause of the attack was said to be financial and domestic troubles. She was treated at another hospital some time before admission, for uterine trouble. Family history good. The prominent features of the attack were that she destroyed her clothing, had no appetite, slept but little, and tried to go about at night. Had no illusion, delusion, or hallucination; no suicidal tendencies. She was thoroughly

1 Journal Nervous and Mental Disease, April, 1891.

hysterical and refused to walk. Although nothing was apparently wrong with her limbs, she would not even stand on her feet. She was very despondent and said she would never be able to walk again. She exaggerated every ache and pain, and insisted that she would die. During the spring of 1891 she developed certain peculiar symptoms. The mucous membrane of the tongue exfoliated daily in large flakes. This finally became so aggravated that she was unable to take solid food and could retain nothing except the smallest quantity of food at a time. Over her body bluish, bruise-like spots appeared, similar to those described by Charcot, Pitres and other French observers in hysterical subjects. At first I suspected the patient of having produced the spots and exfoliations herself, but, after careful watching for some time, failed to discover their source. She became so emaciated and weak that I feared she would die of inanition. Finally, after trying various articles of diet, I put her on Parke, Davis & Co.'s hemoglobin compound, beginning with ten-drop doses every half-hour and gradually increasing to teaspoonful doses. In a week the stomach became steady, the exfoliations of the tongue and the production of discolorations ceased, and she was gradually brought up to the regular diet of the hospital. She suffered from an intense leucorrhea, with pain in the back and ovarian regions, especially the right. Menstrual periods very irregular, sometimes appearing three or four times a month and lasting four or five days. Upon vaginal examination the uterus was found acutely anteflexed, ovary on the right side very much enlarged and bound down. Left ovary not adherent. Although the patient was still very weak, abdominal section was determined upon, and performed October 22d, 1891, with the proper aseptic precautions. Left ovary and tube were not adherent. Right ovary firmly united to the intestines and pelvic wall, and with great difficulty shelled out from the adhesions. This ovary was found to be very much enlarged and flattened, and

there was a small hematoma in the tube. There was considerable hemorrhage into the abdominal cavity, and irrigation with sterilized water was freely used. No drainage. After the operation she was in shock for two hours, but finally rallied under tincture of digitalis and nitrite of amyl. Pulse before the operation, 120. She recovered from the operation slowly, and her pulse ranged from 100 to 138 and required to be stimulated with digitalis and nutritious diet. For two months after the operation her condition was very encouraging. She was bright, pleasant, and hopeful of her ultimate recovery. She would sit up during the day, and made the attempt to walk several times, without success. She was taken in her chair on the lawn and seemed delighted to be in the open air again. Her general health improved; there was no return of the exfoliation of the mucous membrane or the blue spots. Her pulse was stronger and not so rapid. Her appetite increased and she rested more comfortably at night. In January, 1892, she had an attack of depression which lasted two months. During this stage of despondency she refused to speak to any one, even her most intimate friends, and seemed frightened when any one entered her room. She cried a great deal and seemed to be suffering great mental pain. After the depression subsided she gave quite a graphic description of her feelings; said she thought every one who entered her room had come to kill her and dissect her before death. She heard all sorts of sounds and voices speaking to her, which deprived her of sleep at night. She is now fairly cheerful and contented, but still complains of her physical ills; talks very pleasantly, but refuses to get out of bed or make an attempt to walk. While in this case no permanent mental benefit has yet resulted, the morbid condition of the genital organs fully justified the operation. Her physical condition is much better than before the removal of the appendages.

V. *Periodic Mania* (two cases).—In one of the cases there has been some mental change for the better.

Both cases are too recent, however, to hazard any prognosis regarding the mental state.

Case XIII.—N. B., white, single, age 35 years. There is no insanity in the family, but her parents are distantly related. As a child she was erratic and peculiar in her disposition, and when she reached near her majority became very wild and unmanageable, and was committed to an institution for incorrigible girls, where she remained nineteen months. Admitted to the Maryland Hospital for the Insane in 1882, although the mental aberration was noticed two years before admission. While here she has had periods of depression, which occur at irregular intervals and last from two weeks to two months. During this time she is morose and extremely disagreeable, abusing every one who ventures near her. Her language at such times is vulgar and obscene. She makes all sorts of untrue accusations against the doctors and attendants, and never goes out of her room or associates with the other patients. After these attacks pass off she again takes an interest in her surroundings, attends the dances and church, and is amiable, cheerful, pleasant and polite. Her menstrual periods have always been regular, and vaginal examination revealed nothing of special interest. Operated on July 19th, 1892. Abdomen washed externally with a solution of chlorinated soda. Right ovary normal, left cystic. No flushing or drainage. Patient recovered rapidly from the operation, and was sitting up on the tenth day. Sutures were removed on the seventh day, and the wound found united by first intention. Since operation she has not had an attack of depression, but has been rather pleasant and agreeable. No definite improvement so far has resulted from the operation.

Case XIV.—Mrs. L. A. P. S., age 30 years, was admitted to the Maryland Hospital for the Insane, June 7th, 1892. She has been married ten years and had two children, the last being a miscarriage about seven years ago. Family history is not very good, her aunt

on father's side and uncle on mother's side being erratic; and although her mother is not insane, she is rather high-tempered and irritable. Her disposition was very amiable and cheerful, and her habits were ambitious and industrious. Insanity was first noticed about five years ago. She became depressed and despondent, and in a short time had a maniacal outbreak, tore her clothes, broke furniture, and threatened the lives of the members of the family. These attacks always occur at the menstrual period, and between the periods she is much better and comparatively quiet. She has delusions that the members of her family are her enemies. Her menstrual periods are irregular and the flow is scanty. Since admission to the hospital she beats herself and is not very cleanly in her habits. On vaginal examination the vagina was found dilated, slight laceration of the cervix, uterus retroflexed, and tenderness on pressure over the left ovary, but no enlargement could be made out. Abdominal section was performed September 12th, 1892, with the usual aseptic precautions. The ovaries were found cystic. No adhesions. No irrigation. No drainage. The recovery from the operation was without notable incident. At the time of writing no change in her mental condition can be noticed.

VI. *Hystero-epilepsy with Mania* (one case).—The case is a marked example of the benefit to be derived from operative interference in appropriate cases. Cases of hystero-epilepsy have always been regarded by the advocates of the removal of the appendages as suitable cases for the operation. The cases in which brilliant success has followed the operation are too numerous to quote. In the majority of cases the recovery has been not only prompt but permanent. In the single case here reported the contrast is offered of a young woman who for seven years disturbed the hospital about one week in every month by the violence of her actions. The destruction of property and waste of time of attendants and physicians during that time can hardly be esti-

mated. Yet within six months from the time of operation this woman goes out into the world earning her own living—no longer a maniac, but a reasoning and reasonable being ; no longer a burden upon the public, but a producer ; no longer a defective component, but an integral part of the body politic.

Case XV.—M. H., colored, age 33 years. She was married when 12 years old, and had one child eight years ago. No information could be obtained as to her family history. She was admitted to the Maryland Hospital for the Insane March 30th, 1885, and about one month after admission had a miscarriage. Her menstrual flow appeared soon after and continued perfectly regular. With nearly each menstrual period she had convulsive attacks with simulated, if they were not, hystero-epilepsy, followed by maniacal outbreaks. During these paroxysms the patient was very wild and destructive, fighting the attendants and other patients, breaking glass, destroying furniture, doors, etc. She was considered during these attacks the most troublesome patient in the house, and could knock a panel out of an ordinary-sized door at one blow. These paroxysms as a rule occurred during the catamenia, but occasionally between the periods, through jealousy or ill-temper, she would have a similar attack. During the intervals she was quiet, amiable, conversing pleasantly and rationally and did light work about the ward. With the hope of warding off or lessening the frequency of the attacks, she was given steady and active employment, but with no perceptible good effect. Upon vaginal examination she showed considerable tenderness over the right ovary, and a slight cervical tear was found. Abdominal section was performed December 10th, 1891, by Dr. B. D. Evans, then first assistant physician in the hospital, now medical director New Jersey State Asylum at Morris Plains, N. J. Right ovary was very much enlarged and cystic. Left ovary normal. No irrigation or drainage. She did remarkably well, and did not have one bad symp-

tom follow the operation. She was no longer quarrelsome, had no maniacal outbreaks, and only two slight convulsions six weeks after the operation. She remained in a convalescent ward, her language was no longer violent, she assisted the attendants with their work, and on May 12th, 1892, was discharged cured. A few weeks prior to the present writing (September 6th, 1892) she visited the hospital, and was then earning her own living and had no recurrence of the attacks.

VII. *Epilepsy* (three cases).—Two of the cases of epilepsy had such gross lesions of the intrapelvic viscera, with beginning of the attacks after the age of puberty, that there was good reason to hope for some improvement in the neurosis from the cure of the local condition. Unfortunately, both cases died, probably from sepsis. In the third case gratifying improvement has already occurred, both in the epileptic attacks and the psychical condition dependent upon them.

Case XVI.—L. McN., age 23, white, single. Family history good, with the exception of her father being intemperate. She was admitted to the Maryland Hospital for the Insane July 11th, 1891, suffering from epilepsy with mania. The epilepsy came on about seven years ago, but there was no mental aberration until two years ago. When admitted to the hospital she was in a state of mental exaltation, laughing hysterically without apparent cause. Conversation nonsensical, and, like most epileptics, she was very religious, repeating verses of Scripture on all occasions. She was very sexual in her conversation and actions, and wished to marry every man whom she saw in the hall. Upon examination of the genitals an elastic tumor about the size of an orange was found to exist to the right and behind the uterus; great induration and tenderness over the entire pelvic vault. Abdominal section was performed on February 9th, 1892, with the usual aseptic precautions. The ovaries were found filled with pus and behind the fundus of the uterus,

adherent to each other, to the uterus, rectum, and to the small intestines. The oviducts were both filled with pus and dilated to an enormous size. While separating the adhesions a large abscess ruptured and about two ounces of pus discharged, some of which found its way into the peritoneal cavity. There was considerable hemorrhage produced by tearing away the adhesions, and the cavity was flushed with warm distilled water, but no drainage used. Pulse after the operation was 120, temperature 101° F. Second day, pulse 110, temperature 100.6° F.; very talkative, face flushed, skin dry and hot, tongue dry and coated. Third day, pulse 117, temperature 99.7° F,; pulse very weak, patient much worse, with exaggeration of all symptoms. Convulsions on the day of operation as well as on the second and third days after. Died on the morning of the fourth day. Post-mortem showed the peritoneum to be very much congested, with small hemorrhagic spots scattered here and there. Intestines also congested. There was a considerable amount of serous pus in the abdominal cavity. The fatal error in this case was, I think, the omission of drainage. The fact, however, that the patient was an epileptic and likely to have convulsions, deterred me from the use of the tube. I felt so confident, also, that the irrigation had removed all the pus that I risked the case without drainage. In a similar one in future I should drain. There is no doubt that the patient died from sepsis.

Case XVII.—M. B., white, single. Family history good; no epilepsy in the family. Admitted to the Maryland Hospital for the Insane April 4th, 1890. The epileptic seizures dated back several years, but the insanity only developed a short time before admission. When first admitted to the hospital the epileptic attacks occurred once in two weeks. She was quiet, well-behaved, and fairly rational in her conversation, except immediately before an epileptic seizure, when she would become morose and disagreeable and would fight upon the slightest provocation. Sexual excitement

high, and she would throw her arms about any male visitors. The epileptic convulsions increased in frequency, until at the time of operation she had one attack nearly every day. With the increasing epileptic paroxysms her mind showed beginning dementia; she would sit with a silly smile on her face, rarely talk, but if angered would fight. Upon vaginal examination the nymphæ were found elongated and the vagina large and dilated. A large, elastic tumor was made out on the right side and behind the uterus, and was apparently connected with the ovary and tube. It could be equally well made out per rectum. Abdominal section December 30th, 1891. Usual aseptic precautions. She had an apparent epileptic seizure while under the anesthetic, which lasted one minute. Right ovary normal. The left broad ligament was the seat of an elastic, fluctuating cyst about the size of an orange, with the tube crossing the tumor. There was little bleeding, consequently no irrigation. No drainage. The patient was very restless after the operation, and complained of pain in the abdomen. She had several convulsions during the afternoon. Evening temperature 100.4 F. Morning of second day, 101.2° F., tongue dry and coated, skin hot, pulse rapid but strong. Morning of third day, pulse 118 but weak, temperature 102.6° F.; very restless, delirious, skin hot and dry, tongue brown in color and excessively dry. Evening of third day, pulse 149, temperature 104.6 F.; restless, pulse very weak, tongue and skin dry, breathing very labored. Died on the morning of the fourth day. The patient was treated with eliminants, Epsom salts by mouth and enema, and calomel. No effect, however, was obtained upon the march of temperature. While the patient died *in statu epileptico*, I cannot rid myself entirely of the thought that sepis was the main cause of the fatal termination, and might have possibly been averted by drainage. Post-mortem examination disclosed a small quantity of cloudy serum in the pelvic cavity, but no inflammatory action in the peritoneum.

Case XVIII.—M. S., age 24, white, single. Family history good. Admitted to the Maryland Hospital for the Insane April 12th, 1892. She had been afflicted with epilepsy for nine years, and when admitted had about three attacks a week. The convulsions were typical epileptic ones in character and were ushered in by a loud cry. Her abnormal mental condition dates back three years, when she began to act in a peculiar manner and talk a great deal about marriage. She was rather incoherent in her conversation, sexual excitement well marked, and she would embrace any man who ventured in the hall. She had a silly, expressionless face, and, like all epileptics, talked a great deal about religion. Her menses appeared only once, and then about one year after her first epileptic attack. Vaginal examination disclosed elongated nymphæ and a dilated vagina, showing her to be probably addicted to masturbation. There was some irregularity about the cervix, but nothing definite regarding the condition of the ovaries and tubes. Uterine appendages removed May 12th, 1892, and ovaries found markedly cystic. No adhesions. No irrigation. No drainage. Stitches were removed on the eighth day. The wound had united by first intention. An extremely rapid pulse caused some apprehension for some days after the operation, but the patient made a good recovery.

September 1st, 1892: There has been marked improvement in this case during the last three months. She has only had convulsions at the times when her menstrual flow should have been present, and at those times has had two or three attacks only, being free from them entirely in the intervals. The sexual excitement is disappearing rapidly, and she is rarely excited by the sight of men as before the operation.

In conclusion, I may be permitted to briefly recall what I regard as the most prominent points in the foregoing paper. In the first place, I believe the facts recorded demonstrate that there is a fruitful field for gynecological work among insane women. Secondly,

that this work is as practicable and can be pursued with as much success in an insane hospital as elsewhere. Thirdly, that the results obtained not only encourage us to continue, but require us in the name of science and humanity to give to an insane woman the same chance of relief from diseases of the ovaries and uterus that a sane woman has.

II.

A CASE

OF

Trephining for Insanity

BY

J. PERCY WADE, M. D., Assistant Physician

AT THE

Maryland Hospital for the Insane.

PROBABLY nothing in surgery has in the last few years attracted so much attention or study as the operations upon the brain. Not many years ago surgeons were afraid to disturb that delicate organ, and many cases which by a slight operation might have been saved were left to die. But can the surgeon of that day be blamed that he should have a dread of opening the skull and exploring the brain, when his knowledge of the workings of that organ were so deficient! Now the surgeon has no hesitancy in not only opening the cranial cavity for the removal of depressed bone, pus or blood, but tumors of the cerebrum as well as the cerebellum successfully. To-day trephining is done not according to the symptoms, but rather to the nature of the fracture, and all cases of depressed fractures are or should be trephined whether symptoms

of compression exist or not. If such a course were conscientiously followed out in general practice there might be fewer cases of traumatic insanity tabulated in our insane hospitals. Remarkable to say, very little work had been done in trephining for insanity previous to 1887, and up to that time a research will not show over a dozen cases reported.

In 1887 Dr. Fletcher (American Journal of Insanity, vol. xliv. page 212) reported a series of eight cases of traumatic insanity, including epilepsy and dementia, in which trephining was done with two complete recoveries and five improved. In summing up the cases, he says: 1st. That all cases were at times melancholy, suicidal or profane, and four destructive, and none were so after the operation. 2d. If more surgical treatment were undertaken in insane hospitals it would add to the percentage of cures.

Macewen (Medical News, August, 1888) records a case of a male adult injured a year previously, followed by melancholia and intense headache. There was a slight depression at the angular process of the frontal bone. No motor symptoms. Trephining was done and the patient entirely recovered.

Hay (American Lancet, of Detroit) reports eleven cases, with operation, and draws the following conclusions: 1st. That injuries of the head are followed by insanity is admitted. 2d. That the majority of cases are unattended by epileptic convulsions. 3d. That traumatism may produce in previously healthy subjects any form of insanity except general paresis. 4th. That prognosis is much worse in those cases that arise remotely from the reception of the injury.

One peculiarity about insanity due to injuries of the head is the time that elapses between the reception of the injury and the development of insanity, and in the case to be reported four years intervened, during which time the patient was perfectly sane and able to attend to business. Again, it is difficult to predict the amount of mental disorder that may follow an injury to

the brain, and often a severe accident in which the patient remains for several days in a state of coma, may be followed by the loss of memory or some other functional impairment rather than a general psychosis. No cases of insanity give more hopeful prospects of relief by an early operation than those caused by head injuries, and of the few cases reported a good percentage of recoveries followed. The following is a brief history of the case, kindly furnished by Dr. J. D. Blake, of Baltimore:

William B., age 24 years, occupation glass worker, was struck on the left side of the head by a revolving crank in 1883, and sustained a depressed fracture of the frontal bone. He was unconscious several days at that time, but finally recovered and returned to work, apparently neither physically or mentally disabled by the blow. In 1887, four years after the accident, he developed what his physician called "Acute Mania," with suicidal tendencies; was noisy, talkative, obstinate, and unclean in his habits, and on one occasion attempted suicide by taking opium. The cause of the insanity was then traced to the depressed bone, and in the spring of 1887 three buttons of bone were removed at the site of the depression. After the operation his mental condition improved considerably and he was able to return to work, although suffering from slight melancholia, being unable to take an interest in his surroundings and not caring to go away from home. The suicidal proclivities entirely disappeared. During the fall of 1888 he became worse, and underwent a second operation, when more bone was removed: again he improved and was able to return to work. In 1891 he became unmanageable, and was committed to the Maryland Hospital for the Insane on the 24th of March. Family history was exceptionally good, there being no insanity or epilepsy among either immediate or distant relatives. His habits had always been conservative, and he had never used alcohol or tobacco in his life. Before the accident he was perfectly sound mentally, but was never bright at school, only receiv-

ing a primary education, and when he grew up was rather slow to comprehend and act. The prominent feature of his insanity was rather a silly than a vicious type. He would laugh without apparent cause, talk a great deal to himself, and had a silly smile on his face. There was a loss of control and attention. No paralysis. He had no delusions or hallucinations, but was extremely dirty in his habits and slovenly in his personal appearance. His regular morning greeting was "Nice day, isn't it?" although the weather might be anything else but pleasant. His memory was greatly impaired, and he had lost all interest in his home and family. He was always amiable, and never attempted any violence toward his attendants or other patients. Examination of the head showed the circumference to be 22 inches. From the occipal protuberance to glabella 13½ inches. There was a large depression about the size of a half dollar at the junction of the frontal and parietal bones on the left side. As there was some depressed bone still remaining, another operation was thought justifiable, and was performed on April 21st, 1892, by Dr. George H. Rohé, assisted by Drs. B. D. Evans, M. D. Norris, Fred D. Caruthers and J. Percy Wade. The head was completely shaved and washed with soap and water, and for several hours before the operation was kept covered with towels saturated with a solution of bi-cloride of mercury (1 to 4,000). All instruments, towels and dressings were sterilized in steam under slight pressure for one hour.

The water used for washing the hands of the operator and assistants and for sponging was obtained from condensed steam, and necessarily aseptic. The hands of the operator and assistants were also washed in a solution of chlorinated soda (1 to 6). The patient himself was given a brisk purge the day before, and on the morning of the operation a thorough bath. A. C. E. mixture was used as the anaesthetic. The incision was horseshoe in shape, and began anteriorly 1⅝ inches posterior to the orbital ridge of the frontal bone, and

terminated 1 inch above the zygomatic process. The advantage of making the flap with the convexity looking upward, is that the main blood vessels that supply the flap are not cut in making the incision. The flap, therefore, receives ample supply of nutrition, and consequently the line of incision unites more rapidly. The bone was found to be depressed in the anterior angle of the defect and the dura mater adhered to the entire margin. The dura was carefully separated from the bone and about a half inch of bone removed by chisel and rongeur around the entire circumference. The dura was not opened. The cavity was thoroughly washed out with sterilized water and iodoform dusted in. The flap was stitched with seventeen silk worm gut sutures, and iodoform gauze placed over the wound. The patient recovered from the operation without one bad symptom, although quite restless for the first two days. The temperature did not rise above normal and the pulse ranged from 72 to 89. The sutures were removed on the eighth day and the wound was found to be perfectly united without any pus or suppuration. The cavity left by the removal of the bone was quite large and measured in the long diameter 3 inches and 2 inches in the short. The depression was 1½ inch from the zygomatic process to the lowest angle, and 1⅜ inch from external angular process of the frontal bone. The pressure from the depressed bone was exerted upon the posterior portion of the middle and inferior convolutions of the frontal lobes and entire three convolutions of the temporo-sphenoidal lobes, but did not interfere with the motor area. No decided change was noticed in the patient's mental condition during the first month, but afterward he began to improve gradually. He ceased to talk foolishly to a considerable degree, his habits improved, and he took pride in keeping himself neat and clean. The interest in his home and family returned, and he was anxious to get back to work. He was transferred to a convalescent ward and given full liberty of the grounds.

The patient was discharged September, 1892, six months after the operation, and at the time of writing is doing nicely; is employed regularly at his trade, is cheerful, happy and contented; has caused his family no trouble since his departure from the hospital, and there are no indications of any return of the mental disorder. Although his reasoning faculties will probably never be as vigorous as before the accident, nevertheless he will be able to earn a living for himself, and enjoy the benefits of home comforts instead of being confined in an insane hospital, a burden to society and a drawback to his family.

The case has several points of interest which are worthy of some consideration. 1st. The time that elapsed between the reception of the injury and the development of insanity. Although during that time he improved to some extent, it was never permanent, and without the operation there was little hope of full mental restoration. 2d. That the brain cells from which intelligence and reason spring, if only contused may, when the exciting cause is removed (as in this case pressure) recover some of their functional activity. 3d. This case shows the great importance of operating on all cases of depressed fracture of the cranium at the time of the reception of the injury, however slight the depression, and had this case been operated on when first seen, the probabilities are that there would not have been any mental derangement following. 4th. In all cases admitted to insane hospitals careful inquiry and examination should be made as to cranial injuries, and where any depression is discovered an operation is certainly indicated, which in itself is not dangerous, and which gives promise of some improvement, if not entire restoration of the mental faculties.

III.

A CASE SHOWING

THE

RELATION OF KIDNEY DISEASE TO INSANITY

BY

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Maryland Hospital for the Insane

IN reviewing the literature of kidney disease as an etiological factor in insanity, one cannot fail to note the wide difference in statistics, but it is more than likely this is due to some authors noting every case of renal disease, while others report only the most marked cases.

Dr. Christian, of the Eastern Michigan Asylum, reports "out of a total of twenty-six hundred admissions thirty-seven cases in which the appearance of grave disturbances of nutrition have been coincident with the discovery of albumen and tube-casts in the urine. In only about a dozen of these cases could it be said that the mental manifestations were not dependent upon or modified to some extent by the renal disorder."

Dr. Alice Bennett, of the Norristown Asylum, who has contributed a most valuable article on this subject, reports that the kidneys have been frequently found affected at that institution, and she considers uraemic poisoning a common cause of mental alienation.

Bucknill and Tuke, and also Griesinger, regard the

kidney as being a very unimportant factor in causing insanity.

Dr. Clouston, in his work, describes a "variety of mental derangement from uraemic poisoning," which he terms the "Insanity of Bright's Disease." "It usually occurs in chronic cases of Bright's disease with contracted kidneys, where there has been enlargement of the heart and a tendency to dropsy for some time, and where the central nervous system has long been subjected to the influence of imperfectly purified blood."

Dr. L. Bremer, of St. Louis, gives an account in a paper read before the Missouri State Medical Society, of seven cases, and says: "Generally speaking, the insanity of Bright's disease is that of uraemia, and uraemic insanity would perhaps be a more appropriate term. It is, indeed, generally observed only in the graver or fatal forms of nephritis."

Savage, in his manual, says: "I have found a number of cases of insanity in which there has been marked degeneration of the kidneys. And although I cannot pretend to have discovered a renal insanity, I think it is worth while to record cases in which kidney disease has been at least associated with insanity."

Schroeder van der Kolk says: "Among the causative forces acting on the brain, the first place must be given to the blood." If this be true, and we consider how a diseased kidney must throw a large amount of nitrogenous waste products into the blood to be carried to the brain, then we must admit the diseased kidney bears an important relation to insanity.

In this hospital very little work has been done in this line, but in our post-mortem notes there are three marked cases of kidney lesions occurring within the past three months, viz.:

T. R. died June 30th, 1892. Both kidneys were cystic, the left containing five large cysts from one quarter to one half inch in diameter.

E. S. died August 16th, 1892. Both kidneys were

very soft, tearing very easily; the right one was intensely congested. On the upper anterior surface of each was a peculiar granular growth about three-quarters of an inch in circumference and raised about one-sixteenth of an inch above the surface of the kidney.

The third case is the one I intend to report in detail: Dr. J. H. J., age 57, dentist, was twice married. His insanity was attributed by his friends to the explosion of a vulcanizer in his office seventeen years ago, but as he does not bear any signs of having been injured, and as his mental trouble did not manifest itself until three years ago, I do not believe this could have had any connection with his insanity. He was not intemperate and his family history was good, none of his relations, so far as known, ever having been insane. He had an attack of melancholia about three years ago, at which time he was treated in a Delaware asylum for three months and discharged as cured.

He was admitted to the Maryland Hospital for the Insane August 24th, 1891, suffering from melancholia with stupor. The attack dated back about six weeks before admission, at which time the symptoms varied from mania to mental confusion and stupidity. He had no distinct delusions or hallucinations, but had tried to injure his friends on several occasions. During this time he had several slight remissions, but at no time was his mind entirely clear. On admission he was unable to take care of himself and had to be washed, dressed and waited on like an infant; his complexion was sallow, appetite good, bowels constipated. He apparently took no interest in things going on around him, but would sit on the ward all day and not say anything, except occasionally he would answer when spoken to concerning his condition. Although on an open ward he never went out on the grounds except when taken. On examining his urine it was found to contain a considerable amount of albumen. His eyes were examined ophthalmoscopically, but nothing abnormal discovered. During the winter he had a slight apoplectic stroke,

after which he was more stupid than before. In the last two months of his life his legs and feet were oedematous, but the oedema was never very marked until a few days before death, at which time the urine passed daily did not exceed twelve ounces. He died suddenly on September 7th, 1892. Post-mortem there was found general subcutaneous oedema and also considerable fluid beneath the meninges of the brain. In the right occipital lobe the remains of an old apoplectic effusion were found. There was great compensatory hypertrophy of the heart, it being more than double the normal size. The kidneys were slightly contracted and the capsules so closely adherent that they could not be separated without tearing the cortical substance; the cortex had almost entirely disappeared, and what there was of it was decidedly granular.

It is probable that the first attack three years ago was due to an acute nephritis, which never entirely left the patient and gradually developed into the chronic interstitial nephritis, which caused the second attack and the patient's death.

Although this is a subject which until a few years ago received little or no attention, I believe it to be one of importance, and am of the opinion if a thorough and systematic examination of the urine of the insane were made that a considerable number of cases would be found in which kidney lesions play an important part

IV.

ACUTE DELIRIOUS MANIA,

PROBABLY DEPENDING UPON SEPTIC ABSORPTION.

BY

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Maryland Hospital for the Insane.

THE agency of sepsis in the production of insanity, although still denied by many alienists, appears to be gradually gaining acceptance. The view that puerperal insanity is in, at least a large proportion of cases, septic in its origin can no longer be successfully controverted. Among the cases reported by Dr. George H. Rohé, superintendent of this hospital, in his paper on "The Relation of Pelvic Disease to Psychical Disturbances in Women," are four cases of puerperal insanity, apparently due to septic absorption from lesions of the parturient canal. Dr. Rohé draws the following conclusions from these cases:

"1. Puerperal insanity is, in at least the large majority of cases, an infection psychosis.

"2. Without rejecting the influence of other factors such as heredity, anæmia, exhaustion, mental shock and distress, careful observation will show that few cases of puerperal insanity occur without preceding or coincident puerperal infection.

"The reasons for this opinion may be briefly summed up as follows:

"1. Puerperal insanity occurs in the great majority of cases within the first ten days after delivery—about one-half in the first five days—the same period during which puerperal infection usually occurs.

"2. It is usually accompanied by elevation of temperature and other evidences of febrile disturbance.

"3. The clinical form in which puerperal insanity manifests itself is, in the majority of cases, that of acute, delirious, or confusional mania. Depressive states are rare except as secondary forms. In other words, the most frequent condition is one most closely resembling febrile delirium.

"4. The death-rate is much higher than in simple mania. Death occurs from exhaustion, usually with high temperature and rapid pulse.

"5. Post-mortem examinations, though apparently infrequent in these cases, have shown grave involvement of the pelvic viscera.

"6. Examinations of the pelvic organs during life show lacerations of the perineum and cervix uteri (facile channels of infection in the puerperal woman). As secondary conditions are found intra-pelvic (peritoneal) inflammations, and consequent abnormal locations, fixations and congestions of the uterus, tubes and ovaries.

"7. The results of operations seem to show that removal of local sources of irritation increases the chances of recovery from the mental disease."

In the *Medical News* of January 31, 1891, Drs. Lloyd and Tull report a case of "acute delirium," which was apparently dependent upon some septic process. It is to be regretted that the post-mortem examination was so incomplete as not to throw any light upon the actual condition. A case recently in this hospital presented somewhat similar symptoms to that of Lloyd and Tull, that I have thought it worth while to report it here.

Thomas R., aged 39 years, single, white and a farmer by occupation, was admitted March 11th, 1892. The history given on admission was as follows: His

mother is said to have had some nervous affection, but no clear history as to its nature could be obtained. There had never been any epilepsy or insanity in the family. Until the age of 18 he was in good health, even-tempered and industrious, and while at school he had been regarded as an apt and ambitious pupil. At the age of 18 he was struck upon the head during a quarrel, and following this he had at times convulsions said to resemble those of epilepsy. At these times he would be cross and irritable, and while in the intervals perfect harmless he was easily provoked to quarrels in the attacks. About five months before admission this quarrelsome tendency became more marked, and he would strike at anyone who came near him. There is no history that the convulsive attacks became more frequent. He was evidently looked upon as a very dangerous man by his neighbors, for when brought to the hospital he was handcuffed and had his arms and legs lashed together with ropes, so that all movement was impossible. He was also partly stupefied by some narcotic that had been administered to him. His fetters were removed at the entrance to the hospital and he was led upon the ward by a single attendant. The stories of his fighting prowess told by the sheriff and his two deputies who brought him led us to expect a rather troublesome case. He proved to be a very quiet and tractable patient, however, and only on two or three occasions manifested any tendency to fight, which, however, never passed beyond the stage of threats.

On March 18, a week after admission, he had retention of urine and considerable difficulty, with pain in evacuating the bowels. The urine was drawn by catheter, and a digital examination made of the rectum. Nothing abnormal was discovered by this examination, but the urine had to be drawn twice a day for two weeks. The urine was examined and found normal. The knee-jerk was exaggerated and slight ankle clonus was present. There was some impairment of sensation, but no loss of muscular power. Walks with-

out any difficulty. Pupils react to light, and disc normal. No pain on pressure over the cranium or spinal cord. The following day he became irritable and was then placed on chloral and potassium bromide every four hours, under which he soon quieted down. Several days afterward a number of boils were found upon his scrotum, which were attributed at the time to the potassium bromide. This was stopped and the patient put upon tincture of chloride of iron. He complained a good deal of pain in the lower hypogastric region, but careful exploration of the bladder revealed nothing abnormal.

On April 5th the patient had two convulsions, one lasting three minutes and the other a little longer. After the convulsions he was nervous for about an hour and then fell into a deep sleep. The convulsions were described by the attendant as resembling an epileptic fit, but their actual character is open to some doubt.

On April 8th he was seized with a general tremor, which was constant; complains of feeling cold. Can pass his urine, but with difficulty. There is no urethral stricture. On April 11th had a fit, which is noted as a convulsion, but which was probably a chill, as it was followed by fever. Examination of the chest and abdomen failed to show any cause for the fever. The pain in the region of the bladder was still present, but was not complained of so much as formerly. The fever continued, and on April 15th an indurated painful swelling was discovered on the left buttock. Under anesthesia this was opened on the following day by Dr. Rohé and about eight ounces of pus evacuated. The finger was passed up into an enormous intra-pelvic pus cavity extending alongside of, but having no communication with the rectum. The cavity was washed out and packed with iodoform gauze.

After opening the abscess the urine was voided naturally, and apparently without pain. The cavity was washed out daily with boracic acid solution and after-

ward packed with gauze. The patient's mental condition seemed better, but the abscess continued discharging a foul pus and he was evidently losing ground. At times he is delirious and wanders, and talks about going home and looking after the stock on the farm. He has had several severe chills, followed by high fever, the temperature running up to 104.8°. There is evidently some collection of pus, but examination of the old cavity or the rectum, with the finger forced as high up as possible fails to detect it.

Dr. Rohé was convinced that the pus was high up in the pelvis, and had decided to do sacral resection and hunt for it, but the patient failed so rapidly that so serious an operation was deemed inadvisable in his condition. On May 30th the patient died, evidently from septicemia.

The post-mortem examination showed nothing abnormal about the lungs and heart, except old pleuritic adhesions on the right side. The kidneys were cystic, the left containing several cysts.

The dura mater was adherent for some distance along the longitudinal fissure, and was adherent and thickened over the motor area on both sides. Whether these adhesions had aught to do with the convulsive attacks is uncertain.

Over the front of the sacrum and the lower lumbar vertebra there was considerable thickening of the tissues, and on incising this swelling a large pus cavity was found, the pus evidently having started from a psoas abscess. The posterior wall of the pus cavity was formed by the sacrum. A sinus connected this cavity with the opening in the perineum where the abscess had been first opened. The abscess was too high up to be reached from below. A sacral resection in time would have opened the entire cavity and might have saved the patient's life.

Assuming that the patient had true epilepsy, which is by no means certain, it seems probable that the acute symptoms partaking of a confusional or delirious char-

acter were of recent development and probably dependent upon absorption from the pus deposit. The removal of a portion of the pus relieved some of the symptoms, but the impossibility of evacuating the whole by the measures adopted furnished a source for continued absorption of septic materials, to which the mental and physical symptoms may be ascribed.

V.

Results Obtained with Sulfonal and Hyoscine

IN THE TREATMENT OF THE INSANE,

WITH REPORT OF CASES

BY

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Maryland Hospital for the Insane.

THE dual character of this subject makes it a matter of necessity that each part shall be treated of separately and in the order named in the title.

Before detailing the results obtained at this hospital from the use of these agents, it is well that we have a brief summary of their effects, as noticed by alienists who have employed them.

Sulfonal, hypnotic and non-narcotic in character, has been used principally by alienists to produce sleep; and also, to act as a motor sedative. In doses from 20-60 grains (1.30-3.88 grammes) it has been found to act as an almost certain hypnotic. It is not safe, however, to give large doses repeatedly in cases not under close observation, as it has a decided tendency toward poisoning through its cumulative action; Grill (Hospitals Tidende R. 3 bd. 91) reports having observed nine cases of sulfonal poisoning with one fatal result.

That it has been used with equal success in the different mental states, the following will show: "Vorster

(Allgemeine Zeitschrift für Psychiatrie und psychisch-gerichtliche Medicin, Berlin, B. 47 H. I '90) uses sulfonal to secure sleep and motor sedation, which was obtained in the following states: The stage of excitement in secondary delusional insanity, whether acute or chronic; of acute, periodic and chronic mania; of senile dementia; of general paralysis, of idiocy, of epilepsy. In most cases 30 grains (1.94 gm.) per day were sufficient; in a few cases 45 and 60 grains (2.93-3.80 grs.) were given for a short time. The dose was usually 7½-15 grains (0.48-0.97 gr.). Toxic effects were motor paresis, first of the legs, then of the tongue and arms; and sensory somnolence, depression of general sensibility and abolition of superficial reflexes. No effect on circulation or respiration was noticed. In two cases there was a skin eruption" (Rohé: Annual of the Universal Medical Sciences, vol. 2, sec. 2, p. 41).

In treatment at this hospital, sulfonal has been used for its hypnotic effect in the stages of excitement during attacks of acute mania, mania following epilepsy, recurrent mania, chronic mania and also in melancholia.

It has not been our custom to give it regularly each day, but only at those times when, owing to the extreme restlessness and motor excitability of patients, sleep is denied them. In the management of acutely maniacal patients just admitted, when it is necessary to secure immediate rest, and, as is often the case, when the patients' very lives demand it, sulfonal has not failed in any case in which it has been used. Given in drachm doses, preferably in whiskey, not only has it secured from six to eight hours of sound sleep, but it has produced quite a decided amount of motor sedation, lasting from eight to twelve hours after awaking.

In each case sleep was obtained within one hour after administration, and in none were any bad after-effects noticed.

The following cases, three in number, two being acute mania and one epileptic mania, furnish evidence

of the value of sulfonal as a prompt and reliable hypnotic, when given in sufficiently large doses. In the first two cases, both patients had been given morphine injections and other hypnotics by their family physicians, with no appreciable effect. In both cases sulfonal acted promptly. In the third case sulfonal was found to act much more promptly than either bromidia, paraldehyde or morphia, all of which had been previously given.

Case No. 1. T. E. L., farmer, white, age 34, married and father of two children. Insanity in the family denied. Admitted August 29th, 1892, suffering from his second attack of acute mania. The patient during his first attack was an inmate of this hospital for thirteen months, and was considered the worst patient in the house, two and often three attendants at that time being detailed to look after him. The present attack, which was preceded by insomnia of three weeks' duration, started on July 29th, 1892, and is attributed by his friends to overwork and the extreme heat of the sun on that day. Within twenty-four hours previous to admission, the patient had been given over two grains of morphia in divided doses, hypodermically, with no appreciable effect. He was brought to the hospital handcuffed, extremely maniacal, noisy and restless; motor excitement running very high. He sang, swore, danced around, and after the handcuffs were removed in the front of the building, resisted being placed on a ward. After a thorough bath, he was given sulfonal, one drachm in whiskey, and slept from 8 P. M. until the next morning; was much quieter in the morning, becoming restless and excited as the day wore on, but not to an extreme degree. On September 14th he again became extremely maniacal and was given the same amount of sulfonal with an equally good result. At this writing, November 1st, 1892, the patient is progressing very nicely.. (This case will be further reported on under hyoscine.)

Case No. 2. J. E. S., machinist, white, single, age 35

years. Insanity in the family denied. Admitted August 25th, 1892, suffering from an attack of acute mania of ten days' duration. Had been eccentric for three years previous to the outbreak; his insanity being attributed by his friends to a sunstroke. Previous to admission, the patient had been given bromides, chloral and injections of morphia without benefit. Upon admission he presented the following appearance: very maniacal, constantly talking or singing, waving his hands and swaying his body in all directions, never ceasing for a moment. Physical condition bad, was much emaciated, pulse full but weak. He was given sulfonal one drachm in whiskey, and slept eight hours. After waking was much quieter and was induced to take nourishment. It was not necessary to give him sulfonal again until August 29, when he became very maniacal; after administering the same amount, he slept seven hours and was much quieted on awaking. The patient, at this writing, is doing very well. (This case will be further reported on under hyoscine.)

Case No. 3. F. S., cigarmaker, white, single, age 26 years. Insanity in the family denied. Admitted July 18th, 1891, suffering from epileptic insanity, the epilepsy dating from his thirteenth year. The patient from his thirteenth to his eighteenth year was intemperate, and at the time of admission the convulsions were of almost daily occurence. In May, 1892, after a series of very hard fits, he became maniacal; was restless and noisy, especially so at night; would strike at attendants and patients, and had to be watched continually. This attack lasted about ten days. During June and July he had three similar attacks. Was given bromides, chloral, paraldehyde and injections of morphia without quieting him to any great extent, and while the attacks lasted he continued very noisy at night, much to the annoyance of the other patients. During the latter part of August he had a similar attack, which lasted sixteen days. Was given at bed time sulfonal, one drachm in whiskey, three times, at intervals of from

three to five days. Under this treatment he was much quieter during the day and slept well at night, not disturbing the other patients.

Hyoscine, an amorphous alkaloid, derived from the Hyoscyamus Niger, has been extensively used in the treatment of the insane, with, in many cases, excellent results.

In order to get the true effect and obtain looked-for results from its use, it is very essential that a pure article only be employed. Hyoscine is with great difficulty separated from hyoscyamine, a sister alkaloid, possessing different properties. Speaking of this difficulty of separation, Dr. H. C. Wood says: "The separation of hyoscyamine from hyoscine is so difficult that I can not help suspecting that much that is sold often as pure hyoscine is frequently contaminated with the other alkaloid, and that discordant physiological and therapeutic results have been thus entailed." Recognizing this, it is clear to presume that the many different reports of the effects of hyoscine are due to the fact that while some experimenters were using pure hyoscine, others were using various combinations of hyoscine and hyoscyamine. Hyoscine is given either as the hydrobromate, in doses of from 1-150 gr. to 1-50 gr., or as the hydrochlorate up to 1-30 gr. When given hypodermatically, the dose should not exceed 1-75 gr. Caustic alkalies decompose the alkaloid and should not be used with it. Speaking of the effect of hyoscine as a hypnotic, Dr. H. C. Wood, in his excellent work, Therapeutics: Its Principles and Practice, says: "It has proved itself a valuable therapeutic agent, especially in cases of insomnia, with delirious excitement, such as occurs in acute mania and in other forms of insanity. Under these circumstances its effects in producing sleep are often extraordinary; it has been in my experience especially valuable in those cases in

which morphine intensified the excitement, and I have frequently seen it succeed after the failure of both chloral and morphine." Tuke, in his Dictionary of Psychological Medicine, vol. 2, says: "The advantage of hyoscine as a soporific is its freedom from after effects. Some dryness of the throat may occur, and sometimes there is a headache, but the alimentary tract is not upset, and in particular there is no constipation."

In this hospital, hyoscine, in the form of the hydrobromate, has been given internally for its hypnotic and sedative effect in the treatment of acute, recurrent and chronic mania The preparation used is that made by Merck. Owing to the fact that a tolerance of this drug is easily established, it has been our custom to start with doses of 1-125 gr., gradually increasing until the toxic symptoms were well marked. By this method of administration we have succeeded in avoiding to a great extent, a tolerance being set up, and have derived much benefit from its use.

When the toxic symptoms are extremely well marked, its administration is either stopped long enough to allow the effects to wear off, or else the dose is greatly diminished; the guide, in this particular, being the physical condition of the patient. Toxic symptoms noticed were mydriasis, occasionally pronounced, slightly increased pulse rate, mouth and throat dry, voice husky and muscular incoordination, especially of the lower limbs.

In the following cases, two being acute mania and one chronic mania, the administration of hyoscine has been attended with marked benefit to the patients.

The histories of the first two cases have already been given in case 1 and 2, under the heading "Sulfonal."

Case No. 1. T. E. L. Was given sulfonal one drachm, slept ten hours, and was then placed on hyoscine hydrobromate 1-125 gr. every four hours. In this case it was found necessary to increase the dose every third or fourth day, in order to keep the patient quiet. When

the toxic symptoms became well marked the dose was dropped to 1-125 gr., and again gradually increased. This was attended by a decided lessening of the toxic symptoms, the hypnotic and sedative effects being just as pronounced as when the maximum dose was given. Since October 10th the patient has been taking 1-125 gr. only, the dose not having been increased, and he is doing very well. At this writing he is quiet, goes out with the other patients, eats and sleeps well and requires the supervision of only one attendant. The results from the use of hyoscine in this case have been particularly gratifying. Instead of being the most dangerous patient in the institution and requiring constant supervision, as was the case during his first attack, when hyoscine was not used, he has not since admission required any more attention than the average patient.

Case No. 2. J. E. S. After a drachm dose of sulfonal, which secured him much needed sleep, he was placed upon hyoscine hydrobromate in doses of 1-125 gr., administered every four hours. Under this the patient did exceedingly well, and was as quiet as a case of acute mania possibly could be for five or six days, when he again became excited. The dose of hyoscine was increased to 1-110 gr. and the excitement promptly subsided. This occurred two or three times, and each time the dose was slightly increased, after which he would again become quiet. On September 28th, the dose having reached 1-80 gr., and the toxic symptoms being well marked, the hyoscine was dropped. Up to the time of writing, November 1st, the patient has remained quiet, sleeps well without hypnotics and has steadily improved, both mentally and physically.

Case No. 3. V. R. T., track boss, white, age 40 years, has been married 23 years and is the father of six children. Insanity in the family denied. Admitted June 22d, 1892, having been insane for three years previous to admission, the attack being attributed by his friends to sunstroke. Upon admission the patient was very

maniacal, noisy, especially so at night, and restless; tore his clothes and had to be watched continually. He was a constant source of annoyance at night to the patients on the ward, and only slept under large doses of paraldehyde. On September 12th, he was placed upon hyoscine hydrobromate 1-125 gr. every four hours, and after two days became very much quieter. The dose was gradually increased to 1-100 gr. and then dropped to 1-125 gr., which he is taking at the time of this writing. Ever since the administration of the hyoscine, he has been much quieter and is more tractable; does not tear clothing so much as he formerly did, and is sleeping well.

In summing up the results obtained with these drugs, the following conclusions have been reached:

1. That sulfonal is valuable as a hypnotic in maniacal states, when the following conditions are present:

(*a.*) In those acutely maniacal cases just admitted, in which it is necessary to secure sleep promptly.

(*b.*) In those cases complicated by circulatory troubles in which depressing hypnotics are contra-indicated.

(*c.*) In those cases showing the toxic effects of hyoscine whose physical condition call for a stoppage of this drug.

2. That hyoscine is valuable as a hypnotic and motor sedative in the treatment of all maniacal states, attended by stages of excitement, and especially so in hospitals and asylums where the system of physical non-restraint is used.